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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/777,581	02/06/2001	Eyal Lichtman	2681/01247	4780
25937	7590	04/19/2005	EXAMINER	
ZARETSKY & ASSOCIATES PC 8753 W. RUNION DR. PEORIA, AZ 85382-6412			LI, SHI K	
			ART UNIT	PAPER NUMBER
			2633	

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/777,581

Applicant(s)

LICHTMAN ET AL.

Examiner

Shi K. Li

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 03 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) 1-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 21, 31 and 41-44 are objected to because of the following informalities: These claims recite "Wave Division Multiplexing" in the preamble of the claims. It should read "Wavelength Division Multiplexing" (for example, see page 1, line 13 of instant application). Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 21-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over admission (admitted prior art) in view of Müller (U.S. Patent 6,701,085 B1).

Regarding claims 21, 31 and 41, FIG. 2 (prior art) of the instant application discloses an apparatus for MAC based transmission in a WDM optical network. FIG. 2 (prior art) comprises OADM 32 with a first drop module 34 for dropping a first channel from a first fiber ring and a first add module 36 for adding a second channel to the first fiber ring, a second OADM 38 with a second drop module 40 for dropping a third channel from a second fiber ring and a second add module 42 for adding a fourth channel to the second fiber ring, a first MAC module with a first transmitter for providing said second channel and a receiver for receiving the first channel, a second MAC module with a transmitter for providing said fourth channel and a receiver for receiving said third channel. The difference between admission (FIG. 2) and the claimed invention is the OADMs and that the admission MAC modules add/drop to/from the same fiber ring. Müller teaches in FIG. 1 a ring architecture and teaches in FIG. 3 the details of a node

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structure. Müller teaches in FIG. 3 $WDUX_0$ and $WMUX_0$ for demultiplexing and multiplexing west bound traffic. Together, $WDUX_0$ and $WMUX_0$ form an $OADM_0$. Similarly, Müller teaches in FIG. 3 $WDUX_w$ and $WMUX_w$ for demultiplexing and multiplexing east bound traffic. Together, $WDUX_w$ and $WMUX_w$ form an $OADM_w$. Müller also teaches to connect working line/trunk module W_0 to $OADM_0$ and working line/trunk module W_w to $OADM_w$. One of ordinary skill in the art would have been motivated to combine the teaching of Müller with admission because traffic are usually bi-directional and it is desirable for two nodes to communicate via the short path along the ring. For example, it is desirable to send traffic from node A to node D in clock-wise direction and to send traffic from node D to node A in counter-clock-wise direction. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to arrange multiplexer and demultiplexer on the east side as an $OADM$, multiplexer and demultiplexer on the west side as another $OADM$, and arrange traffic so that bi-directional traffic between two nodes are routed via the short path along the ring, as taught by Müller, in FIG. 2 (prior art) of instant application.

Regarding claims 22 and 40, admission (FIG. 2) teaches $OADM$ 32.

Regarding claims 23-25 and 32-34, it is well known in the art that channel of same wavelength or different wavelengths can be used for bi-directional traffic between two nodes. For example, in FIG. 1 of Müller, the channel use for traffic from node A to node D is independent of the channel for traffic from node D to node A. Also, the channel use for traffic from A to node D is independent of the channel for traffic from node A to node B.

Regarding claims 26-29 and 35-38, admission (FIG. 2) teaches Ethernet switch 66 connected to MAC modules 60 and 49.

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Regarding claims 30 and 39, admission (FIG. 2) and Müller include node B with arrangement similar to node A.

Regarding claims 42-44, admission (FIG. 2) and Müller include node B with arrangement similar to node A. When the add module of OADM 32 and the drop module of the OADM in node B are tuned to the same wavelength, signal transmitted by transmitter 62 is receiver by MAC module in node B. Similarly, receiver 64 of node A receives signal transmitted by MAC module of node B. Note that in the modified network of admission and Müller, traffic from node A to node B is carried by fiber 46 and traffic from node B to node A is carried by fiber 48 because they are the shortest routes between node A and node B.

Response to Arguments

4. Applicant's arguments with respect to claims 21-44 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shi K. Li whose telephone number is 571 272-3031. The examiner can normally be reached on Monday-Friday (8:30 a.m. - 5:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

skl

11 April 2005



Shi K. Li
Patent Examiner